

**Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (currently amended) An *in vitro* method which comprises labeling a biological molecule with hyperpolarized  $^{129}\text{Xe}$ , and observing a magnetic response resonance (NMR) spectrum and/or NMR image of the hyperpolarized  $^{129}\text{Xe}$  in the environment of the biological molecule, wherein the biological molecule is an assay reagent taking part in an assay method.
2. Cancelled.
3. (currently amended) The method of claim 23, wherein the assay is a competition assay or an immunoassay.
4. (currently amended) The method of claim 23, wherein the assay is a hybridization assay or a binding assay.
5. (previously amended) The method of claim 1 wherein the biological molecule is a peptide or a protein.
6. (previously amended) The method of claim 1 wherein the hyperpolarized  $^{129}\text{Xe}$  is enriched at a level of 40% or more.

7. (previously amended) The method of claim 1 wherein the degree of hyperpolarisation is 8% or more.
8. (previously amended) The method of claim 1 which is performed in a solution wherein the solvent has a viscosity in the range of 700 to 1500mPs.
9. (previously amended) The method of claim 1 wherein the pressure of the xenon gas is at least 5 bar.